



ROI OF SOFTWARE SOLUTIONS

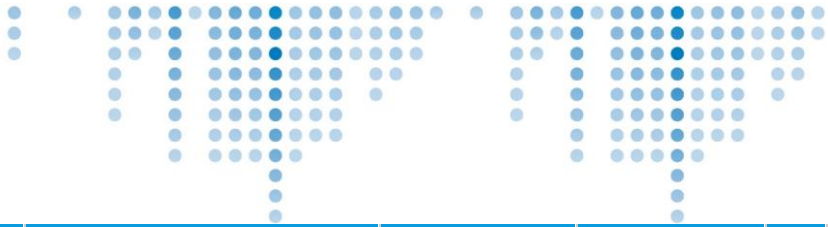
CREATED: MARCH 2016

According to CIO Magazine, no organization buys enterprise software for the sake of owning it. It's all about the ROI. The software is bought to realize benefits that flow from use. There are four categories of benefits:

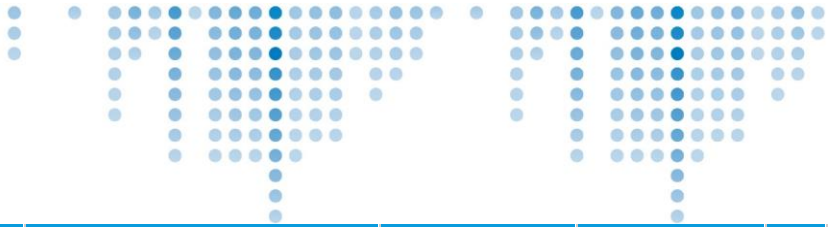
1. **Increases** in things like revenue, profit, growth, efficiency, speed,, compliance
2. **Reductions** in things like costs, time, complaints, attrition, and complexity.
3. **Improvements to** things like productivity, processes, quality, and reliability.
4. **Creation of** things like strategy, alignments, new products, new processes.

This snapshot will provide examples of the benefits, value, and / or return on investment that organizations have achieved by implementing various software solutions. Examples are **vendor agnostic** – e.g., not tied to a specific vendor's solutions.

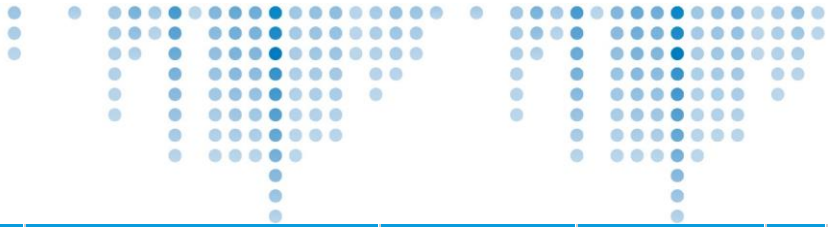
Industry	Solution Area	Value/ROI	Source	Title	Date
Manufacturing (Automobile)	Analytics	Analytical metrics helped establish a global product parts taxonomy that eventually was credited with saving the company \$2 billion in costs.	MIT Sloan Management Review	Beyond the Hype: The Hard Work Behind Analytics Success	2016
Cross Industry	Business Intelligence	48% of respondents report an ROI of 10% or more, and 35% achieve that ROI within two years.	Forrester	Quantify the Tangible Business Value Of BI	2016
Cross Industry	Data Quality	Organizations with high data quality experienced a 14% year over year growth in revenue.	Aberdeen Group	The Three Levels of ROI From Data Quality Initiatives	2016
Cross Industry	Analytics (Big Data)	For Big data analytics— the most recent major technology wave—the average initial increase in profits from big data investments was 6 percent for the companies we	McKinsey Quarterly	Big Data: Getting a Better Read on Performance	2016



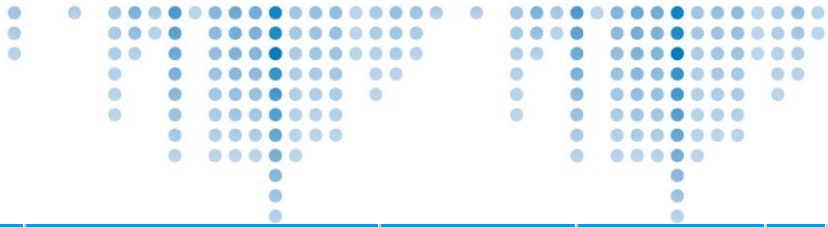
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Cross Industry	Business Intelligence / Analytics	<p>studied. That increased to 9 percent for investments spanning five years.</p> <ul style="list-style-type: none"> Organizations with high BI allocations have data that is 13% more accurate and 14% more complete than all other organizations. Organizations that spend more than 10% of their IT budget on BI average a 7% reduction in operating costs, 15% increase in operating profit, and average 18% organic revenue growth year-over-year. 	Aberdeen Group	Big Budgets for IT and BI: Who Has the Dollars?	2016
Government	Analytics (Predictive)	In the third implementation year of the Fraud Prevention System, the Department of Health and Human Services return on investment from the use of predictive analytics resulted in \$133,200,896 of adjusted actual and projected savings to the Medicare Fee-for-Service program.	Office of Inspector General, DHHS	The Fraud Prevention System Increased Recovery and Prevention of Improper Medicare Payments	2015
Cross Industry	Analytics (Big Data)	Over half of the committed executives say it [big data analytics] has increased revenue by more than 3%. Over 90% say it has increased revenue by more than 1%.	Forbes Insights	Big Bets on Big Data: Who, Where and What	2015
Cross Industry	Hadoop	Hadoop adopters have 29% more users per capita than non-adopters that have	Aberdeen Group	Disruptive Technology in Analytics:	2015



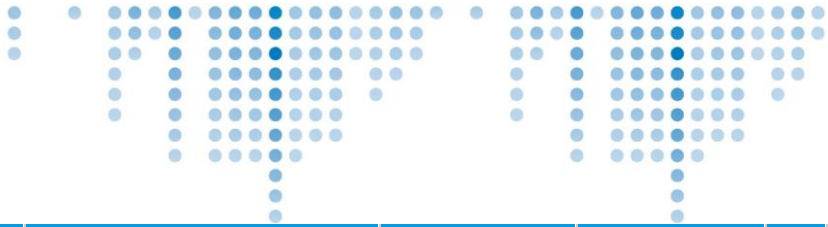
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Cross Industry	Personalization Solutions	improved time-to-decision over the past year. 60% of organizations are seeing a positive ROI from personalization technologies.	Accenture	Showcasing Hadoop Accenture Technology Vision 2015: Trend 1 – Internet of Me	2015
Telecommunications	Customer Intelligence	A leading wireless company conducted analyses using inputs on communication chain performance based on customers eligible to be contacted, attempted contacts, live contacts and meaningful contacts; daily product sales and customer remorse returns; and six months of historical product sales and customer remorse returns. As a result of this analytics-driven approach, the company was able to reduce remorse returns by 25 percent, realize improvement in annual lifecycle revenue and triple return on investment (ROI).	Supply & Demand Chain Executive	Five Ways Analytics Can Mine the Gold in Your Post-Sales Supply Chain	2015
Insurance	Analytics (Customer)	With a predictive acquisition model, for example, a European insurance company reduced outbound campaign costs by 30% and increased long-term customer profitability by 20%.	Forrester	How Analytics Drives Customer Life-Cycle Management	2015



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Manufacturing (Automobile)	Analytics	Analytics helped the OEM protect their approximate 5.7 million customers that were at risk of defection. The annual uplift in revenue based on a 1 percent increase in acquisition rates through better analytics was estimated at \$1.2 billion annually.	Deloitte	Big data and analytics in the automotive industry	2015
Cross Industry	Marketing Automation	<ul style="list-style-type: none"> • Lead generation increased 15-25%. • Number of new customers increased 0-5%. • Marketing campaign reach increased 30-50%. • Marketing and campaign planning costs reduced by 5-15%. • Multichannel campaign and promotion improved 20-30%. • Campaign execution time reduced by 20-30% 	Forrester	Quantify The Business Value Of CRM <i>(no link to source)</i>	2015
Manufacturing (Automobile)	Analytics (Marketing)	An organization realized an annual growth rate of 650 percent through the company's enhanced ability to drive innovation as a result of the insights gained from analytics. Revenue, volume and sales increased 100 percent, 20 percent, and 62 percent, respectively. And, finally, using analytics to optimize operations, marketing ROI increased 15	Deloitte	Big data and analytics in the automotive industry	2015



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Financial Services	Risk	<p>percent while agency savings increased 20 percent.</p> <p>Recent discussions with Tier 1 FIs have revealed that, if managed properly, the integration of multiple risk and compliance functions can deliver cost savings between 20% and 30%, as a broad estimate.</p>	Chartis Research	Tackling financial crime through integrated risk and compliance	2015
Telecommunications	Analytics (Customer)	XO Communications, a business-to-business telecom service provider, told us it used churn modeling to boost customer revenue retention by 60%.	Forrester	How Analytics Drives Customer Life-Cycle Management	2015
Cross Industry	Analytics (Marketing)	Mature users of predictive analytics technology are more likely to be experiencing tangible gains to their bottom lines. Close to half of these leading organizations (48%) report returns on investment of greater than 25%.	Forbes Insights	The Predictive Journey: 2015 Survey on Predictive Marketing Strategies	2015
Insurance	Analytics (Customer)	Farmers Insurance leveraged its CLV model to yield an ROI improvement of 14% on its direct marketing efforts.	Forrester	Drives Customer Life-Cycle Management	2015
Cross Industry	Hadoop	Hadoop users saw a 22% greater rate of customer retention compared with similar organizations that haven't yet adopted Hadoop.	Aberdeen Group	Hadoop-Enabled Analytics: The Elephant Enlightens the Blind Men	2014



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Cross Industry	Analytics (Customer)	The average returns from CRM have increased since 2011, from \$5.60 to \$8.71 for every dollar spent.	Nucleus Research	CRM Pays Back \$8.71 for Every Dollar Spent	2014
Cross Industry	Analytics (Customer)	The most common benefits included better customer targeting, which was reported by nearly three quarters of those surveyed (71%) while over half of respondents also reported improved response/conversion rates (58%), improved marketing personalization (51%), and improved customer experience (51%). Elsewhere, almost half of respondents also report increased customer retention (47%).	Teradata	Digital Marketing Insights Report	2014
Cross Industry	Analytics	Analytics Pays Back \$13.01 for Every Dollar Spent.	Nucleus Research	Analytics Pays Back \$13.01 for Every Dollar Spent	2014
Government	Big Data	<ul style="list-style-type: none"> One large national agency at a European government was experiencing slowdowns in utilization, cancelled queries and storage limitations. After implementing a new solution for big data processing, storage requirements fell by 90 percent, Total Cost of Operations (TCO) dropped, 	Accenture	Big Success With Big Data: Executive Summary	2014



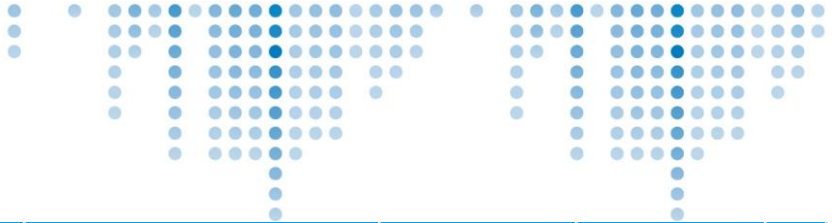
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		<p>and previously impossible statistical analysis is now routine.</p> <ul style="list-style-type: none"> • A new credit card data warehouse reduced storage management costs, enhancing service to the bank's hundreds of millions of card holders. 			
Manufacturing	Supply Chain Intelligence	A superior Demand Driven Supply Chain helped Kimberly-Clark reduce its inventory of finished goods by 19%.	Capgemini	Advanced Demand Driven Supply Chain in Retail	2014
Manufacturing	Supply Chain Risk Management	<ul style="list-style-type: none"> • For a typical medium-sized manufacturing company with revenue of 200 million USD, the actual savings through process efficiency alone quickly amount to considerably more than 200,000 USD per annum. • A significant benefit of SCRM is generated by the immense potentials through risk prevention measures: Losses of up to 7.5 % of revenue (approx. 15 million USD in our sample company) can be avoided by means of risk prevention, or can at least be considerably reduced in a crisis situation. 	Riskmethods GmbH	ROI of Supply Chain Risk Management	2014
Manufacturing (Automobile)	Telematics / Analytics	GM focuses on sensors and telematics within their cars and that saves them a lot of money as well as make the cars more secure and reliable. For GM telematics means big bucks, because	SmartData Collective	3 Use Cases of How General Motors Applies Big Data to Become Profitable Again	2014



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Cross Industry	Business Intelligence	<p>thanks to Big Data they can provide savings of up to \$ 800 per car.</p> <ul style="list-style-type: none"> • Making better informed business decisions. • Gaining competitive advantage. • Expanding the scope of data we leverage to include more data and more extreme scale. • Ensuring compliance and reducing risks. • Improving customer interaction and satisfaction. • Monitoring and improving business performance across departmental silos. • Improving and optimizing process performance. • Monitoring process performance. • Achieving better business transparency. • Improving data quality and consistency. • Improving business planning. 	Forrester	Best Practices: Maximize Your Chances of Business Intelligence Success	2014
Banking	Analytics (Customer)	<ul style="list-style-type: none"> • 360-degree view of the customer at a lower cost. • Social media monitoring costs reduced by more than \$100,000 per annum. 	Forrester	Big Data In Banking: It's Time To Act	2014



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Transportation	Analytics (Predictive)	<ul style="list-style-type: none"> • Dashboards provide decision-makers at the bank with near-real-time insight into customer sentiment and preferences. • Transformation of the customer engagement and response process. • Customer service productivity levels improved by 20%. <p>By analyzing a continuous stream of sensor data from its thousands of delivery trucks, the global company has eliminated 5.3 million miles from its routes, reduced engine idling time by almost 10 million minutes, saved 650,000 gallons of fuel and reduced its carbon emissions by more than 6,500 metric tons.</p>	Computerworld	Data analytics: Eye-popping results from Intel, UPS and Express Scripts	2013
Manufacturing (Electronic Equipment)	Analytics (Predictive)	<ul style="list-style-type: none"> • Intel is using a predictive analytics tool to reduce microprocessor testing time. The company saved about \$3 million in testing during a proof-of-concept period. By 2014, as the tool is implemented more widely, Stevenson expects it to rack up another \$30 million in savings companywide. • Intel IT created a new reseller sales tool that worked to increase the chip maker's revenue by enabling 	Computerworld	Data analytics: Eye-popping results from Intel, UPS and Express Scripts	2013



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		<p>its sales team to identify, then strategically focus on, larger-volume resellers. The new software engine mines large sets of internal and external data, then applies a predictive algorithm to pinpoint the most promising resellers. So far, it has helped identify three times as many high-potential resellers in the Asia-Pacific region as manual methods typically would have uncovered, according to Stevenson. That translates to about \$20 million in potential new and incremental sales. More gains are expected as the tools are rolled out to other geographies.</p>			

